Chapter 2:

1. Use the figures in Table 2.1 to answer the following questions.
   a. For which decade did federal government current expenditures rise more, the 1980s or the 1990s?
   b. During the period 1995 to 2005 which grew faster: federal government current expenditures or state and local government current expenditures?
   c. Compute the rate of growth in state and local government current expenditures for the periods 1995 to 2000 and 2000 to 2005 and explain whether there has been a significant change.

   Answer:
   a. Federal current expenditure increases:
      1980s: 1259.2/589.5 = 2.14
      1990s: 1871.9/1259.2 = 1.49
      Since federal expenditures rose 114% in the 1980s and 49% in the 1990s, the correct answer is the 1980s.
   b. Federal: 2573.1/1614.0 = 1.59
      State and local: 1704.5/ 982.7 = 1.73
      Since federal current expenditures rose 59% from 1995 to 2005 and state and local current expenditures rose 73%, the correct answer is state and local current expenditures.
   c. State and local current expenditures:
      1995-2000: 1281.3/982.7 = 1.30
      2000-2005: 1704.5/1281.3 = 1.33
      The rate of increase in state and local government expenditure growth was about the same during the period 2000-05 as it was during 1995-2000, increasing slightly from a 30% growth rate to 33%.

2. Use the figures in Table 2.3 to answer the following questions.
   a. For which five-year period listed in the table was the rate of growth of federal government expenditures greatest?
   b. For which five-year period listed in the table was the rate of growth of state and local government expenditures greatest?
   c. For which five-year period listed in the table was the rate of growth in grants to state and local governments greatest?

   Answers:
   a. 1965 to 1970

Period	Rate of Growth
1960-65	1.266
1965-70	1.403
1970-75	1.252
1975-80	1.190
1980-85	1.253

1985-90	1.128
1990-95	1.135
1995-2000	1.067
2000-05	1.219
2005-2009	1.254

b. 1965-70

Period	Rate of Growth
1960-65	1.393
1965-70	1.543
1970-75	1.328
1975-80	1.118
1980-85	1.173
1985-90	1.253
1990-95	1.189
1995-2000	1.199
2000-05	1.179
2005-2009	1.079

c. 1965-70

Period	Rate of Growth
1960-65	1.679
1965-70	2.197
1970-75	1.694
1975-80	1.127
1980-85	0.868
1985-90	1.175
1990-95	1.464
1995-2000	1.235
2000-05	1.295
2005-09	1.220

3. Use the figures in Table 2.4 to answer the following questions.
   a. For the period 1970-2005 compute the rate of growth in federal receipts (as a percent of GDP) for each five year period. Identify the five-year time period over which receipts grew fastest as a percent of GDP.

   b. For the period 1980-2005 compute the rate of growth in federal debt (as a percent of GDP) for each five year period. Identify the five-year period over which federal debt grew fastest as a share of GDP.

   Answers:
   a. 1995 to 2000

Period ending	Rate of Growth
1975	0.942
1980	1.061

1985	0.932
1990	1.017
1995	1.022
2000	1.120
2005	0.840

b. 1980 to 1985

Period ending	Rate of Growth
1985	1.311
1990	1.276
1995	1.199
2000	0.855
2005	1.108

4. Use the figures in Table 2.5 to answer the following questions.
   a. For which five-year period listed in the table was the rate of growth of federal government expenditures per capita greatest?
   b. For which five-year period listed in the table was the rate of growth of state and local government expenditures per capita greatest?
   c. For which five-year period listed in the table was the rate of growth in grants to state and local governments per capita greatest?

Answers:

a. 1970-75

Period	Rate of Growth
1960-65	1.261
1965-70	1.623
1970-75	1.640
1975-80	1.605
1980-85	1.544
1985-90	1.260
1990-95	1.203
1995-2000	1.095
2000-05	1.311
2005-10	1.401

b. 1965-70

Period	Rate of Growth
1960-65	1.388
1965-70	1.785
1970-75	1.740
1975-80	1.508
1980-85	1.446
1985-90	1.399
1990-95	1.260
1995-99	1.231

c. 1965-70

Period	Rate of Growth
1960-65	1.679
1965-70	2.536
1970-75	2.219
1975-80	1.521
1980-85	1.069
1985-90	1.313
1990-95	1.551
1995-99	1.267

5. Find the state of your residence in Table 2.7. Note where it ranks in total taxes per capita and state taxes per capita.
   a. Can you explain why your state ranks as it does? Are there particular features of your state's economy that affect its ranking?
   b. Find the ranking for a neighboring state in Table 6. Explain why there may be similarities or differences between your home state and the neighbor state.
   c. If you are originally from a state other than your current state of residence, look up both states in Table 2.7 and see if you can explain, based on your knowledge of the two states, why their rankings may differ.

   Answers:
   a. Answer will vary.
   b. Answer will vary.
   c. Answer will vary.

6. Use the GDP deflator reported in table below to convert the nominal expenditure per capita figures in Table 2.5 into real terms, answering the following questions.

Year	GDP Deflator (2005 = 100)
1960	18.604
1965	19.919
1970	24.317
1975	33.563
1980	47.751
1985	61.576
1990	72.201
1995	81.536
2000	88.647
2005	100.000
2010	110.654

   a. Explain how real per capita federal expenditures changed over the period 2000 to 2010. Compare this to the change in nominal per capita federal expenditures.

b. Explain how real per capita state and local government expenditures changed over the period 1995 to 2005. Compare this to the change in nominal per capita state and local government expenditures.
c. Explain how real per capita grants to state and local governments changed over the period 1980 to 1990. Compare this to the change in nominal per capita grants to state and local governments.

Answers:
b. Real per capita federal expenditures 2000; 6628.90/(88.647/100) = 7,477.86
Real per capita federal expenditures 2010; 12180.60/(110.654/100) = 11,007.83
Real per capita expenditures increased 47%, 11,007.83/7,477.86 = 1.462, while nominal expenditures increased 84%, 12,180.60/6,628.90 = 1.837
c. Real per capita state and local expenditures 1995; 3,686.60/(81.536/100) = 4,521.44
Real per capita state and local expenditures 2005; 5,758.60/(100/100) = 5,758.60
Real per capita expenditures increased 27%, 5,758.60/4,521.44 = 1.274, while nominal expenditures increased 56%, 5,758.60/3,686.60 = 1.562
d. Real per capita grants 1980; 317.5/(47.751/100) = 664.91
Real per capita grants 1990; 445.4/(72.201/100) = 616.89
Real per capita grants fell 7%, 616.89/664.91 = 0.928, while nominal per capita grants rose 40%, 445.4/317.5 = 1.403.

7. Use the population figures reported in table below to convert the real government receipts and expenditures in Table 2.3 into real per capita terms, answering the following questions.

Year	Population of U.S. (thousands)
1960	180,671
1965	194,303
1970	205,052
1975	215,973
1980	227,726
1985	238,466
1990	250,132
1995	266,557
2000	282,385
2005	295,994
2010	308,746

a. Explain how real per capita federal expenditures changed over the period 2000 to 2010. Compare this to the change in nominal per capita federal expenditures.
b. Explain how real per capita state and local government expenditures changed over the period 1985 to 1995. Compare this to the change in real state and local government expenditures (not per capita).
c. Explain how real per capita grants to state and local governments changed over the period 1970 to 1980. Compare this to the change in real grants to state and local governments (not per capita).

Answers:

a. Real per capita federal expenditures 2000: 1,000,000*2,111.60/282,385 = 7,477.73
Real per capita federal expenditures 2010: 1,000,000*3,398.60/308,746 = 11,007.75
Real per capita change: 11,007.75/7,477.73 = 1.472, or a 47.2% increase
Nominal change: = 83.7% (from Table 2.5)
So real per capita expenditures increased 47% while nominal per capita expenditures increased 84%

b. Real per capita state and local expenditures 1995: 1,000,000*1,205.30/266,557 = 4,521.73
Real per capital state and local expenditures 1985: 1,000,000*809.1/227,726 = 3,392.94
Real Percentage change: 4,521.73/3,392.94 = 1.333, or a 33.3% increase
Nominal change: 76.3% (from Table 2.5)
So real per capita expenditures increased 33% while nominal per capita expenditures increased 76 %

c. Real per capita grants 1980: 1,000,000*151.3/227,726 = 664.39
Real per capita grants 1970: 1,000,000*79.3/205,052 = 386.73
Real Percentage change: 664.39/386.73 = 1.718, or a 71.8% increase
Nominal Percentage change: 237.4% (from Table 2.5)
So real per capita grants increased 72% while nominal per capita grants increased 237%

8. Use the information in the following table on receipts by the federal and state/local governments to support your evaluation of the following proposition: *During the period 2000 to 20010 federal government receipts grew more in real terms than state and local government receipts.*

Fiscal Year	Federal government receipts (billions of current dollars)	State and local government receipts (billions of current dollars)	*GDP* deflator (2005 = 100)
2000	2,057.1	1,322.6	88.648
2010	2,416.4	2,142.7	110.654

Answer: This proposition is false because real federal receipts fell by 6% while real state and local receipts grew by 30%.

Fiscal Year	Federal government receipts (billions of constant dollars)	Rate of growth	State and local government receipts (billions of constant dollars)	Rate of growth
2000	2,320.53		1,491.97	
2010	2,183.74	-6%	1,936.40	+29.7%